WORLD INTELLECTUAL PROPE International Bu

INTERNATIONAL APPLICATION PUBLISHED UNDER

(51) International Patent Classificati n 6: A61B 17/70, 17/80, 17/86

(11) Int

(43) International Publication Date:

21 March 1996 (21.03.96)

(21) International Application Number:

PCT/US95/11681

(22) International Filing Date:

14 September 1995 (14.09.95)

(30) Priority Data:

08/306,670

US 15 September 1994 (15.09.94)

(71) Applicant: SMITH & NEPHEW RICHARDS INC. [US/US]; 1450 Brooks Road, Memphis, TN 38116 (US).

(72) Inventors: FOLEY, Kevin, T.; Suite 600, 930 Madison Avenue, Memphis, TN 38103-3440 (US). KLARA, Peter, M.; Suite 1100, 880 Kempsville Road, Norfolk, VA 23502 (US). MAXWELL, Keith; Suite 200, 41 Oakland Avenue. Asheville, NC 28801 (US). MIDDLETON, Lance; 7350 Royce Cove, Memphis, TN 38125 (US). MORRISON, Matthew, M.; 7882 Meadow Vale Drive, Memphis, TN 38125-3144 (US).

(74) Agent: DOUGLAS, Earl; Smith & Nephew North America, Legal Dept., 1450 Brooks Road, Memphis, TN 38116 (US). (81) Designated States: AT, AU, CA, JP, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT.

Published

With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: OSTEOSYNTHESIS APPARATUS

(57) Abstract

A bone fixation apparatus (10) having an elongated plate member (12) with at least two pairs of circular openings (24, 26) and at least one clongated slot (28) positioned along the longitudinal axis of the plate member (12). The plate member (12) is formed so as to include a curve in the transverse plane (TP). The openings and slot each form a cavity with walls extending between the upper and lower plate member surfaces (16, 18) with smaller diameter wall portions (32) at the plate member upper and lower surfaces and a larger diameter wall portion (34) therebetween. The openings (24, 26) and slot (28) are shaped to allow for angulation of an implanted bone screw (14). A plurality of bone screws (14) have a threaded first end portion (36) adapted for implantation into a patient's bone mass and a spherically shaped enlarged second end portion (40). A locking member (48) connects to the second end portion (40) to grip the cavity wall of the plate member (12) so as to lock each bone screw (14) into a selected position within the openings (24, 26) and slot (28) of the plate member (12).

